

**Notice of Allowability**

Application No.

09/826,934

Examiner

Jerome Grant II

Applicant(s)

OKINAKA ET AL.

Art Unit

2626

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4-8-2005.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☒ The drawings filed on 06 April 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4-8-2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

JEROME GRANT II  
PRIMARY EXAMINER

### Reasons for Allowance

Claims 1-9 are allowed for the reason the prior art does not teach or suggest in claimed combination, "...dot pattern of which the size corresponds to said threshold matrix is divided into intersperse blocks of at least first and second groups of blocks and wherein... for gray level of all gray levels, the dot pattern of the output image is mutually different for at least some blocks of the second group of blocks... for increasing gray level, the number of dots in the dot pattern of the output image is increased while substantially maintaining conformity of the dot patterns at a boundary corresponding to a boundary of the threshold matrix."

Claims 10-16 are allowed for the reason the prior art does not teach in claimed combination, "... a dot pattern of which the size corresponds to said threshold matrix is divided into interspersed blocks of at least first and second groups of blocks and wherein the matrix is created according to the conditions which include and for each gray level of all gray levels, the dot patterns of the output image is mutually different for at least some blocks of the second group of blocks, and for increasing gray levels, an order of dot increase in the dot pattern of the output image."

Claims 17 and 18 are allowed for the reason the prior art does not teach or suggest in claimed combination, "... interspersed blocks of at least first and second groups blocks and wherein said threshold matrix is created according to the following conditions: the number of dots in the dot pattern of the output image is equal in each of all the blocks for each gray level of all gray levels the dot pattern of the output image is mutually the same in each block of the first group of blocks for each gray level of all the gray levels, the dot pattern of the output image is mutually different for at least some blocks of the second group of blocks, and for increasing gray levels the number of dots in the dot pattern of the output image is increase while substantially maintaining conformity of the dot patterns at a boundary corresponding to a boundary of the threshold matrix."

Claim 19 is allowed for the reason the prior art does not teach or suggest in claimed combination, "... the dot pattern of the output image is mutually the same in each block of the first group of blocks for each gray level of all gray levels, the dot pattern of the output image is mutually different for at least some e blocks of the second group of blocks, and for increasing gray levels, an order of dot increase in the dot pattern of the output image is controlled between the blocks of the first group and the blocks of the second group."

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Claims 20 and 21 are allowed for the reason the prior art does not teach or suggest, "... wherein a dot pattern of which the size corresponds to said threshold matrix is divided into interspersed blocks of at least first and second groups of blocks and wherein said threshold matrix is created so that for each gray level of all gray levels, the number of dots in the dot pattern of the output image is equal in each of all the blocks and for each of all gray levels, the dot pattern of the output of the output image is mutually different for at least some blocks of the second of blocks and for increasing gray levels, the number of dots in the dot pattern of the output image is increased while substantially maintaining conformity of the dot patterns at a boundary corresponding to a boundary of the threshold matrix."

With respect to claim 22, the prior art does not teach or suggest in claimed combination, wherein a dot a pattern of which the size corresponds to said threshold matrix is divided into interspersed blocks of at least first and second groups of blocks, and wherein said threshold matrix is created according to each gray level of all gray levels, the number of dots in the dot pattern of the output image is equal in each of all the blocks... for each gray level of all gray levels, the dot a pattern of the output image is mutually different for at least some blocks of the second group of blocks and for increasing gray levels an order of dot increase in the dot pattern of the output image is controlled between the blocks of the first group and the blocks of the second group."

With respect to claims 23 and 24, the prior art does not teach in claimed combination, "... interspersed blocks of at least first and second groups of blocks and wherein said threshold matrix is created according to the following conditions for each gray level of all gray levels the number of dots in the dot pattern of the output image is equal in each of all the blocks for each gray level of all gray levels, the dot pattern of the output image mutually the same in each block of the first group of blocks, for each gray level of all the gray levels, the dot pattern of the output image is mutually different for at least some blocks of the second group of blocks and for increasing gray levels, the number of dots in the dot pattern of the output image is increased while substantially maintaining conformity of the dot patterns at boundary corresponding to a boundary of the threshold matrix said control program comprising: a comparison step for comparing a threshold value of the threshold matrix with the density of each pixel of the original image for each pixel."

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Claim 25 is allowed for the reason the prior art does not teach or suggest in claimed combination, "... interspersed blocks of at least first and second groups of blocks and wherein said threshold matrix is created according to the following conditions: for each gray level of all gray levels, the number of dots in the dot pattern of the output image is equal in each of all the blocks, for each gray level of all gray levels, the dot pattern of the output image is mutually the same in each block of the first group of blocks, for each gray level of all the gray levels, the dot pattern of the output image is mutually different for at least some blocks of the second group of blocks and for increase on gray levels an order of dot increase in the dot pattern of the output image is controlled between the blocks of the first group and the blocks of the second group and comparing the threshold value of the threshold matrix with the density of each pixel of the original image for each pixel."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached on 571-272-7471. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jerome Grant II  
571-272-7463

**JEROME GRANT II**  
**PRIMARY EXAMINER**

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### Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edward Kmett on June 15, 2005.

In the claims:

In claim 3, amend line 1 as follows: Delete "A method according to Claim 1 or 2," and replace with "A method according to anyone of claims 1 or 2," .

In claim 20 on the first line of page 12, change "he" to --the--.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams, can be reached on 571-272-7471. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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J. Grant II

